

### **REMARKS**

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

#### **1. Submission of Certified Priority Document**

The Examiner indicated in the Office Action that a copy of certified priority document has not been received by the PTO. Submitted herewith is a certified copy of the priority document, FR 9913791, having a filing date of November 4, 1999.

#### **2. Species Election under 35 U.S.C. 121**

##### ***I. Item 1 of the Detailed Action***

In this item of the Detailed Action, the Examiner asserted that the present invention claimed two patentably distinct species, with reference to the formulae in claim 1: a) compound wherein X is oxygen; and b) compound wherein X is NR<sub>6</sub>.

As a formality, Applicants confirm the election of species b) made by Mr. Peter Rogalskyj in his telephone conversation with the Examiner on April 30, 2003. Claims readable on species b) include claims 1-3, 7-13 and 15-37. Claims 4-6 and 14 are regarded as not readable on species b) and were withdrawn from being considered by the Examiner. Applicants acknowledge the Examiner's designation of claims 1-3, 11-13 and 16-37 as generic claims.

With regard to the examination of Markush-type claims, such as claim 1 in the present application, the MPEP provides:

If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even though they are directed to independent and distinct inventions. In such a case, the examiner will not follow the procedure described below and will not require restriction.

...

As an example, in the case of an application with a Markush-type claim drawn to the compound C-R, wherein R is a radical selected from the group consisting of A, B, C, D, and E, the examiner may require a provisional election of a single species, CA, CB, CC, CD, or CE. The Markush-type claim would then be examined fully with respect to the elected species and any species considered to be clearly unpatentable over the elected species. If on examination the elected species is found to be anticipated or rendered obvious by prior art, the Markush-type claim and claims to the elected species shall be rejected, and claims to the nonelected species would be held withdrawn from

further consideration. As in the prevailing practice, a second action on the rejected claims would be made final.

On the other hand, should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended. If prior art is then found that anticipates or renders obvious the Markush-type claim with respect to a nonelected species, the Markush-type claim shall be rejected and claims to the nonelected species held withdrawn from further consideration. The prior art search, however, will not be extended unnecessarily to cover all nonelected species. Should applicant, in response to this rejection of the Markush-type claim, overcome the rejection, as by amending the Markush-type claim to exclude the species anticipated or rendered obvious by the prior art, the amended Markush-type claim will be reexamined. ...

The MPEP, Eighth Edition, 803.02 (emphases added).

As indicated in Items 6 and 7 of the Detailed Action and discussed in Item 4 of this paper, infra, the Examiner has indicated the allowability of the subject matters as claimed in claims 7-10 and 15 of the present application directed solely to species b). As indicated in Item 3 of the Detailed Action and discussed infra, the Examiner rejected the generic claims 1-3, 11-13 and 16-37 under 35 U.S.C. § 103. Therefore, apparently the Examiner has conducted patent search on both species a) and b), and rejected these generic claims because of the alleged unpatentability of the non-elected species a). Accordingly, the Examiner has withdrawn claims 4-6 and 14, which are directed solely to species a), from further consideration in the Office Action.

As indicated infra in this paper, the Examiner's rejections of species a) under 35 U.S.C. § 103 is being respectfully traversed. Applicants submit that the species a) compounds claims directed thereto are patentable under 35 U.S.C. § 103, infra. Thus, the Examiner's reconsideration of claims 4-6 and 14 is requested.

### **3. Allowed Claims/Subject Matter**

#### ***II. Items 6 and 7 of the Detailed Action***

Applicant notes with appreciation that the Examiner has indicated the subject matter of claims 7-10 and 15 are patentable, and would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112 set forth in the Office Action and to include all the limitations of the base claim and any intervening claims.

As indicated supra, claims 7-10 and 15 are directed solely to species b) compounds. Therefore, in these two items in the Detailed Action, the Examiner has acknowledged the

patentability of the subject matters of these claims, which are the species b) compounds, wherein X represents NR<sub>6</sub> group.

#### **4. Rejections under 35 U.S.C. § 112**

##### **III. Item 5 of the Detailed Action**

In this item of the Detailed Action, the Examiner has rejected claims 1-3, 7-13 and 15-37 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In response, Applicants have amended the Markush-type claims by adding --the group consisting of-- after the phrase "selected from" where necessary and appropriate. In claims 27, 29, 31, 33, 35 and 37, Applicants have amended to recite --and-- instead of "or" between the penultimate and the last members of the Markush group.

#### **5. Rejection under 35 U.S.C. § 103**

##### **IV. Item 3 of the Detailed Action**

In this item, the Examiner has rejected the generic claims 1-3, 11-13 and 16-37 under 35 U.S.C. § 103(a) as being unpatentable over Knowles et al. (United States Patent No. 5,451,344).

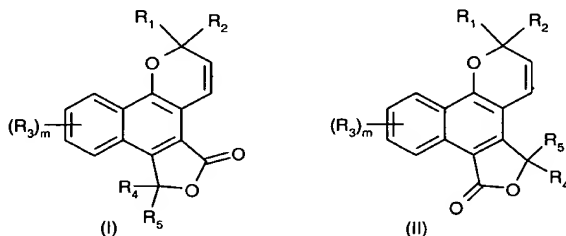
As indicated supra, the Examiner has indicated the patentability of the species b) compounds by showing the allowability of claims 7-10 and 15 in Items 6 and 7 of the Detailed Action. Since only two species, species a) and b) are involved in these generic claims, a logical conclusion is that the rejections under 35 U.S.C. § 103(a) were made to the species a) compounds.

The Examiner asserted that

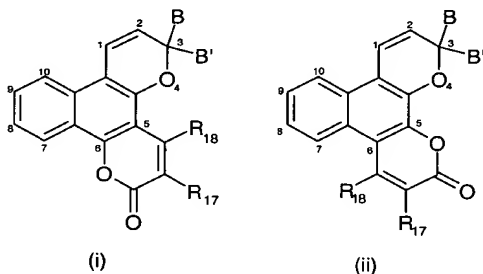
While Knowles et al. may not exemplify the compounds claimed herein by applicants and their use in photochromic compositions and articles such as ophthalmic lenses, windows, etc., together with complementary photochromic compounds of a different type and with polymers such as poly (methyl methacrylates), cellulose acetate or triacetate, etc., they clearly suggest the compounds and compositions and articles, and thus render them prima facie obvious. As to the compounds, see especially column 2, line 49 – column 5, line 8, noting Formula IA3 together with Formula IIE; and as to the compositions and articles, see especially column 13, line 42 – column 17, line 34.

Applicants respectfully traverse this rejection.

Species a) compounds as claimed by Applicant in claim 1 are represented by the following formula (I) and/or (II) below:

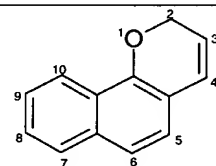
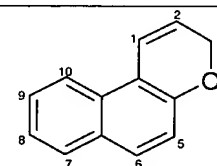


The compounds as disclosed in Knowles et al. are very different. The compounds (IA3+IIE) as specifically pointed out by the Examiner as similar compounds, in their closest forms, are represented by the following formulae (i) and (ii) below:



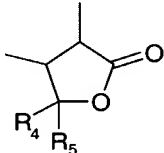
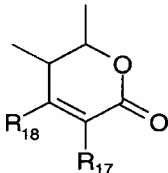
As can be seen from the structures, compounds (I)/(II) of the present invention differ from compounds (i)/(ii) of Knowles et al. in many respects. For example:

- They are based on two distinct naphthopyran isomer base structures, namely 2H-naphtho[1,2-b]pyran and 3H-naphtho[2,1-b]pyran:

The present application	<u>Knowles et al.</u>
2H-naphtho[1,2-b]pyran	3H-naphtho[2,1-b]pyran
	

Indeed all other compounds as illustrated and disclosed in Knowles et al. are based on the 3H-naphtho[2,1-b]pyran structure above.

- The rings fused to the two base structures are distinct from each other. The fused ring in the present application is a 5-membered ring. The fused ring in Knowles et al. is an unsaturated 6-membered ring.

The present application	<u>Knowles et al.</u>
	

- The carbonyl group in the above 5-membered fused ring of the present application is attached to the carbon atom directly linked to the naphtho ring, thus forming a big  $\pi$  system. Whereas the carbonyl group of the 6-membered fused ring of Knowles et al. is not attached to a carbon directly linked to the naphtho ring. These structures can lead to different electronic distribution in the molecules, causing differing photochromic properties.

In view of the substantial structural differences between the species a) compounds as claimed in claim 1 of the present application and those disclosed in Knowles et al., Applicants respectfully submit that Knowles et al. does not suggest the species b) compound of the present application, contrary to the Examiner's assertion.

Because Knowles et al. does not suggest the species a) compounds, and the species b) compounds have been acknowledged as patentable by the Examiner, the generic claims 1-3, 11-13 and 16, which are directed to species a) and b) compounds, should NOT be obvious over Knowles et al., hence should be allowable. Generic claims 17-37, which are directed to matters and/or articles comprising the species a) and b) compounds, should therefore be allowable as well.

Because the generic claims are not obvious over Knowles et al., the Examiner is respectfully requested to reconsider the withdrawn claims 4-6 and 14, which are directed solely to species a) compounds.

Indeed since the species a) compounds are not obvious over Knowles et al., claims 4-6 and 14, which are directed to species a) compounds only, are allowable over Knowles et al.

## 6. Conclusion

Based upon the above amendments, remarks, and papers of record, Applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request the Examiner to reconsider and examine claims 4-6 and 14 which were previously withdrawn from consideration. Applicants respectfully request reconsideration of the pending claims 1-37 and a prompt Notice of Allowance thereon.

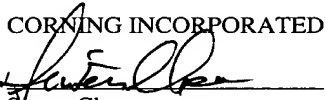
Applicants believe that no extension of time is necessary to make this Response timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorize the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

The undersigned attorney is granted limited recognition by the Office of Discipline and Enrollment of the USPTO to practice before the USPTO in capacity as an employee of Corning Incorporated. A copy of the document granting such limited recognition is submitted herewith. It is respectfully requested that this document be entered into the file as well.

Please direct any questions or comments to the undersigned at (607) 248-1253.

Respectfully submitted,

CORNING INCORPORATED

  
Siwen Chen

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Date: August 6, 2003

Date of Deposit: August 7, 2003

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date indicated above with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

  
Signature